

Centre No.						Paper Reference						Surname	Initial(s)	
Candidate No.						1	3	8	0	/	3	H	Signature	

Paper Reference(s)

1380/3H

Edexcel GCSE

Mathematics (Linear) – 1380

Paper 3 (Non-Calculator)

Transformation



Past Paper Questions

Arranged by Topic

Model Answers

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers

Nil

Examiner's use only

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Team Leader's use only

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Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.

Check that you have the correct question paper.

Answer ALL the questions. Write your answers in the spaces provided in this question paper.

You must NOT write on the formulae page.

Anything you write on the formulae page will gain NO credit.

If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2).

There are 26 questions in this question paper. The total mark for this paper is 100.

There are 24 pages in this question paper. Any blank pages are indicated.

Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.

Work steadily through the paper. Do not spend too long on one question.

If you cannot answer a question, leave it and attempt the next one.

Return at the end to those you have left out.

Lots more free papers at:

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Compiled by Peter Bland

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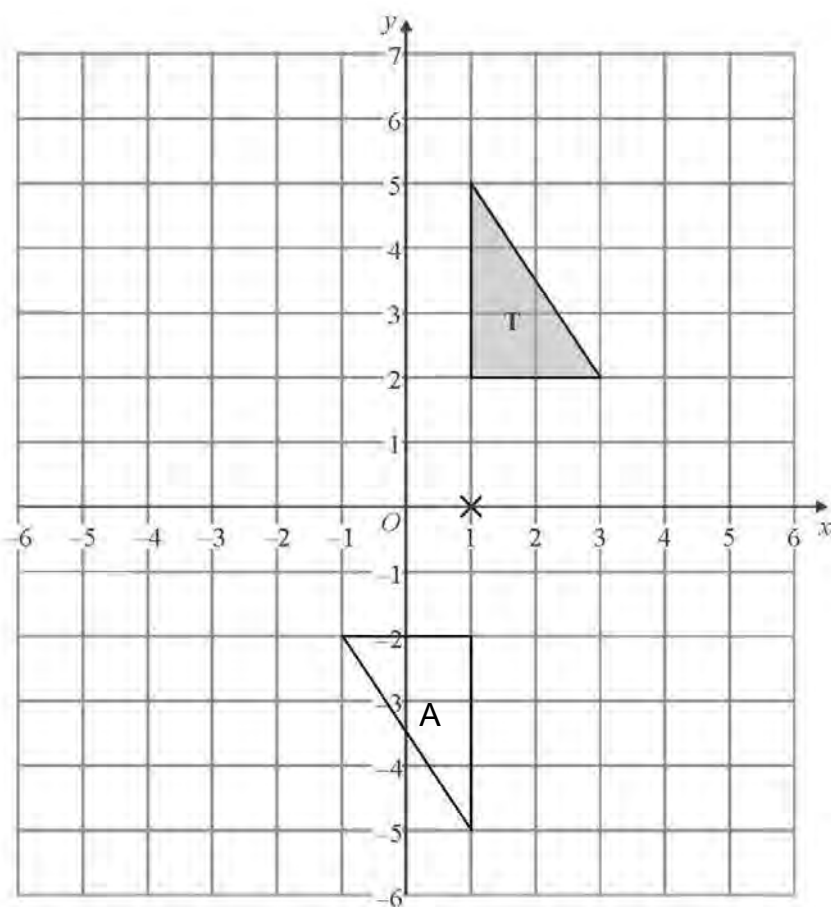
N 3 4 7 3 0 A 0 1 2 4

Turn over

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Leave
blank

1.



Triangle T has been drawn on the grid.

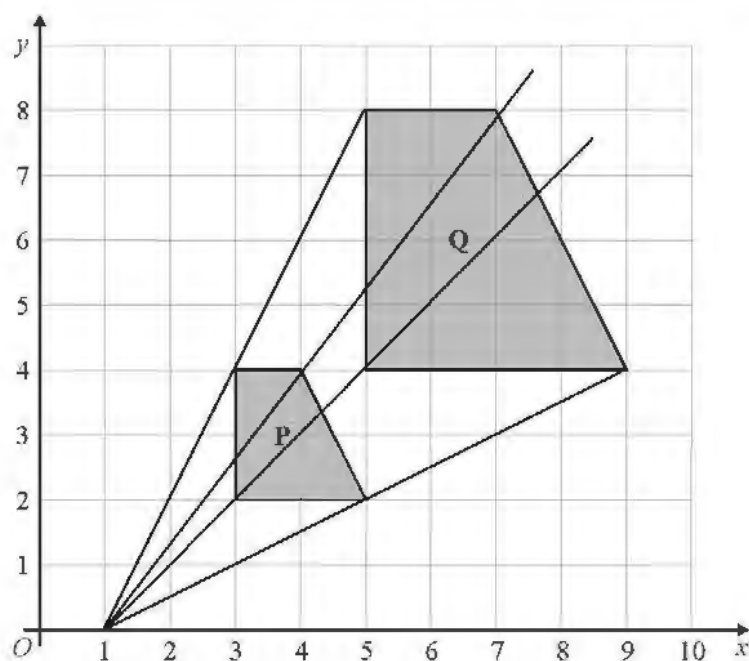
Rotate triangle T 180° about the point (1, 0).

Label the new triangle A.

Q1

(Total 2 marks)

2.



Describe fully the single transformation which maps shape P onto shape Q.

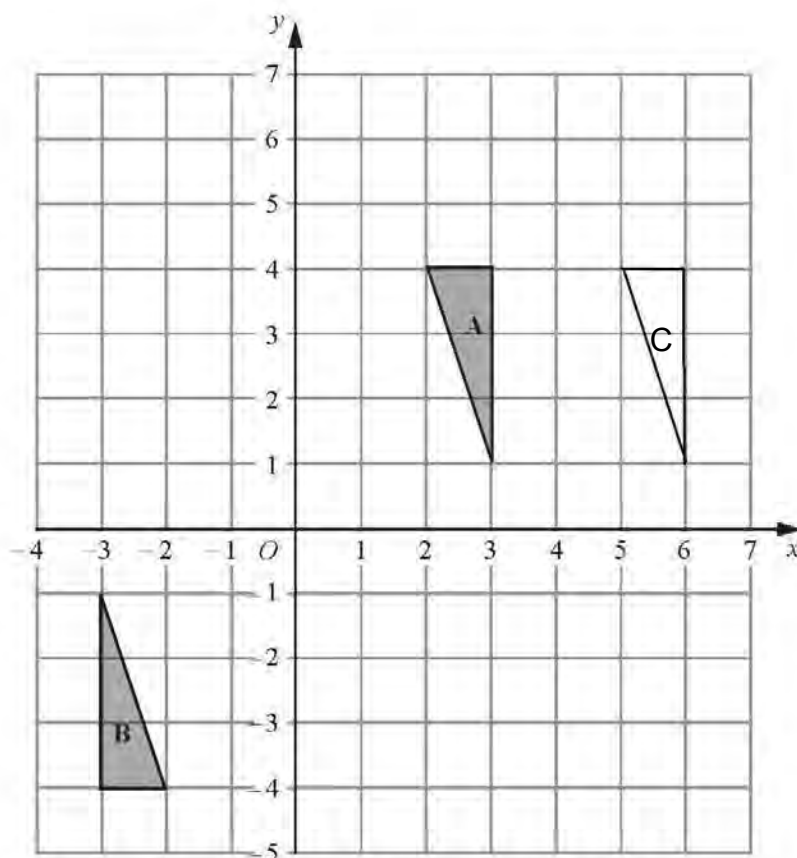
Shape Q is the image of shape P after enlargement by a scale factor of 2 with a centre of enlargement at (1, 0).

.....

Q2

(Total 3 marks)

3.



I suggest you use tracing paper to help with rotation questions.

Triangle A and triangle B are drawn on the grid.

- (a) Describe fully the single transformation which maps triangle A onto triangle B.

..... Triangle B is the image of triangle A after rotation through 180 degrees clockwise
about (0, 0)

.....
Three things are needed: angle, direction, centre of rotation. (3)

- (b) Translate triangle A by the vector $\begin{pmatrix} 3 \\ 0 \end{pmatrix}$.

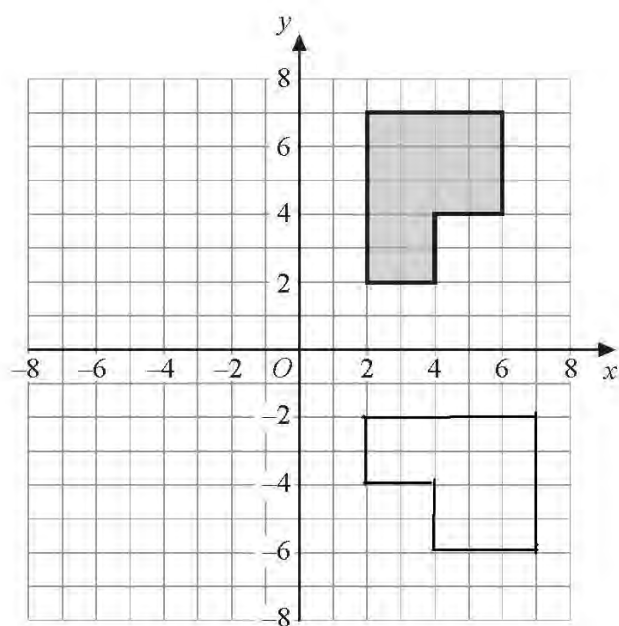
Label the new triangle C.

(1)

Q3

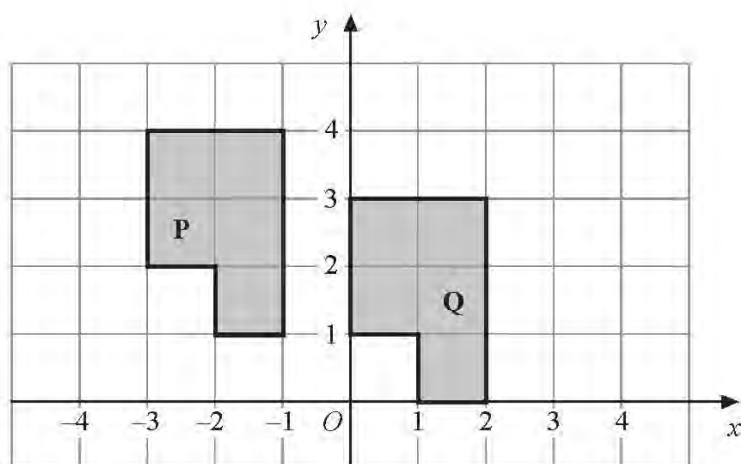
(Total 4 marks)

4.



- (a) Rotate the shaded shape 90° clockwise about the point O .

(2)



- (b) Describe fully the single transformation that will map shape **P** onto shape **Q**.

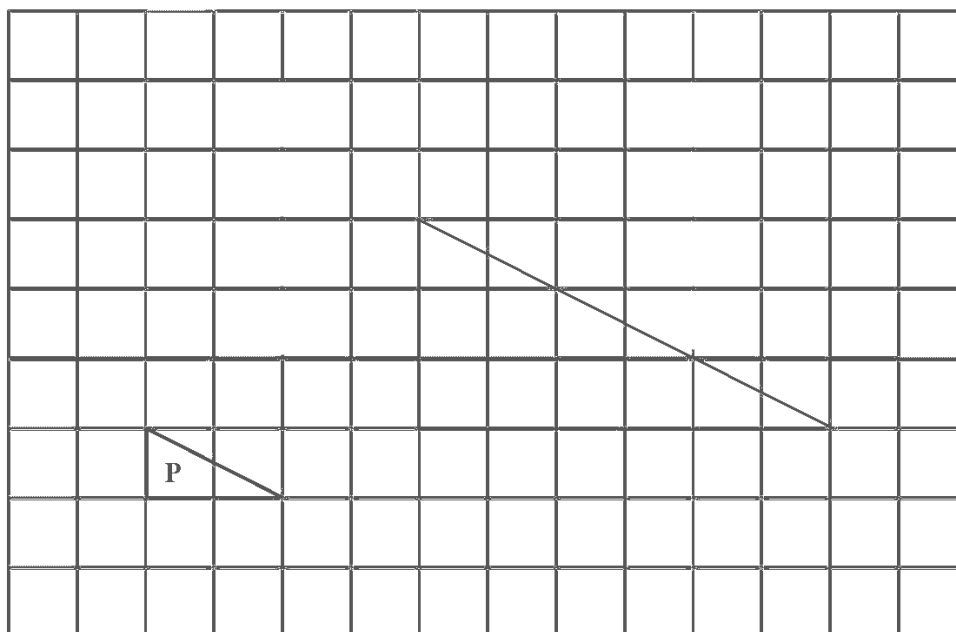
Q is the image of P after translation with the vector $\begin{pmatrix} 3 \\ -1 \end{pmatrix}$

(2)

Q4

(Total 4 marks)

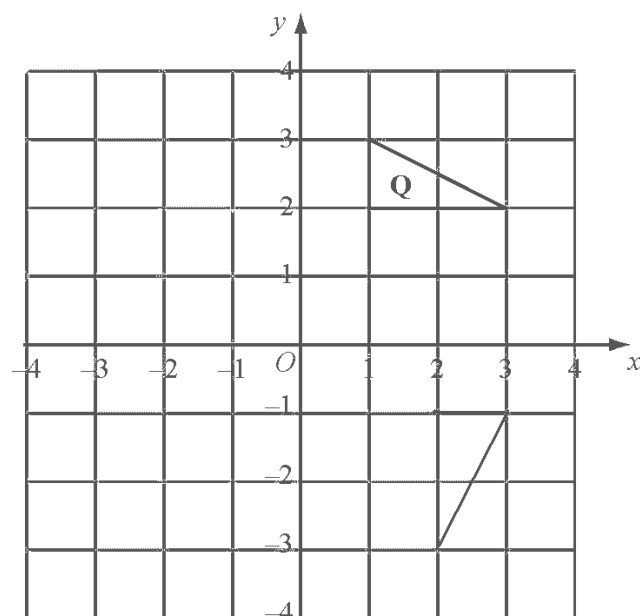
5.



Triangle **P** has been drawn on a grid.

- (a) On the grid, draw an enlargement of the triangle **P** with scale factor 3

(2)



Triangle **Q** has been drawn on a grid.

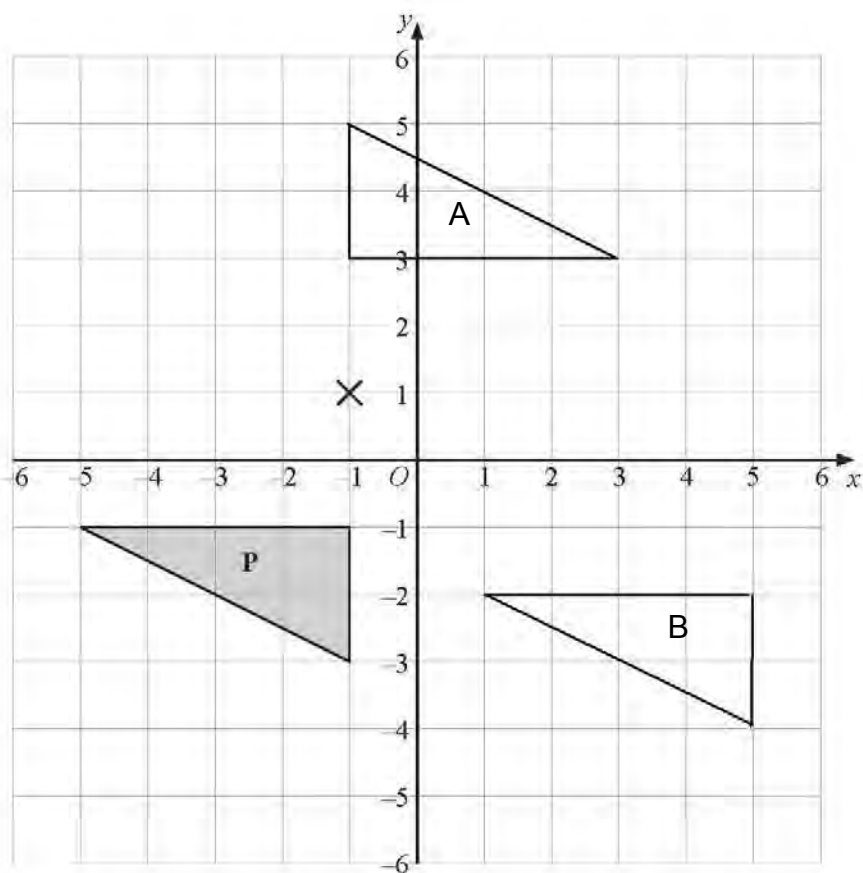
- (b) On the grid, rotate triangle **Q** 90° clockwise, centre *O*.

(3)

(Total 5 marks)

Q5

6.



- (a) Rotate triangle **P** 180° about the point $(-1, 1)$.

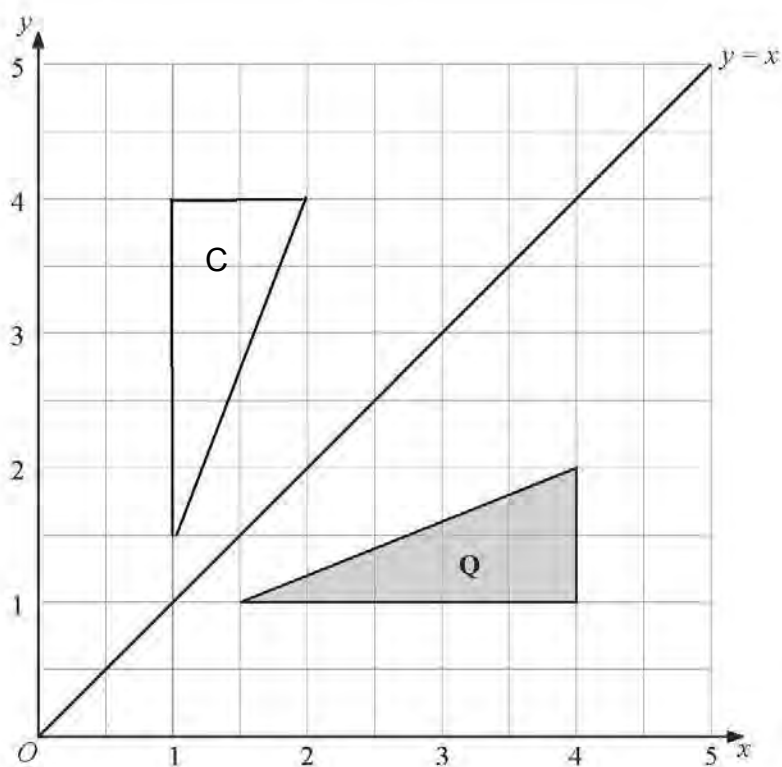
Label the new triangle **A**.

(2)

- (b) Translate triangle **P** by the vector $\begin{pmatrix} 6 \\ -1 \end{pmatrix}$.

Label the new triangle **B**.

(1)



(c) Reflect triangle **Q** in the line $y = x$.

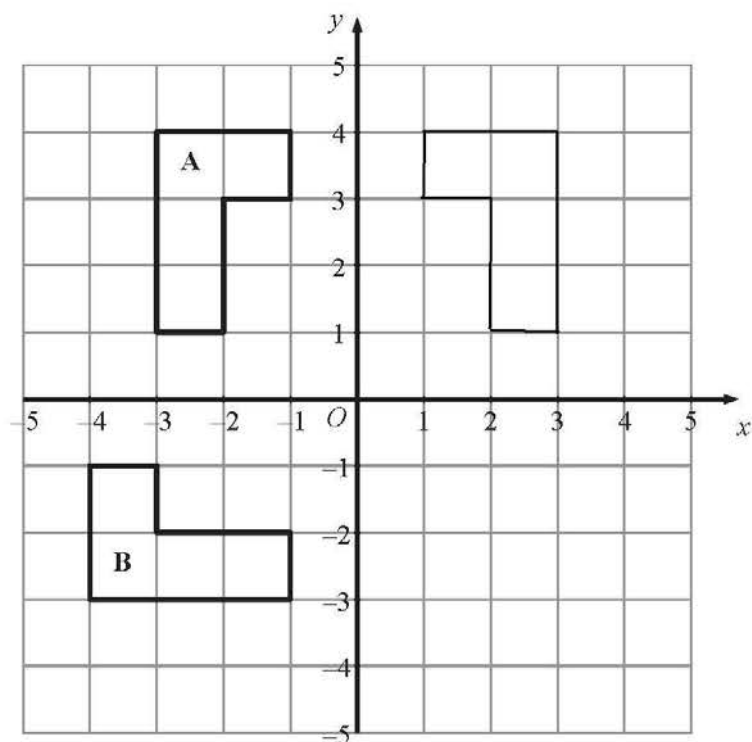
Label the new triangle **C**.

(2)

Q6

(Total 5 marks)

7.



(a) Reflect shape A in the y axis.

(2)

(b) Describe fully the **single** transformation which takes shape A to shape B.

Shape B is the image of A after rotation through 90° clockwise about point O

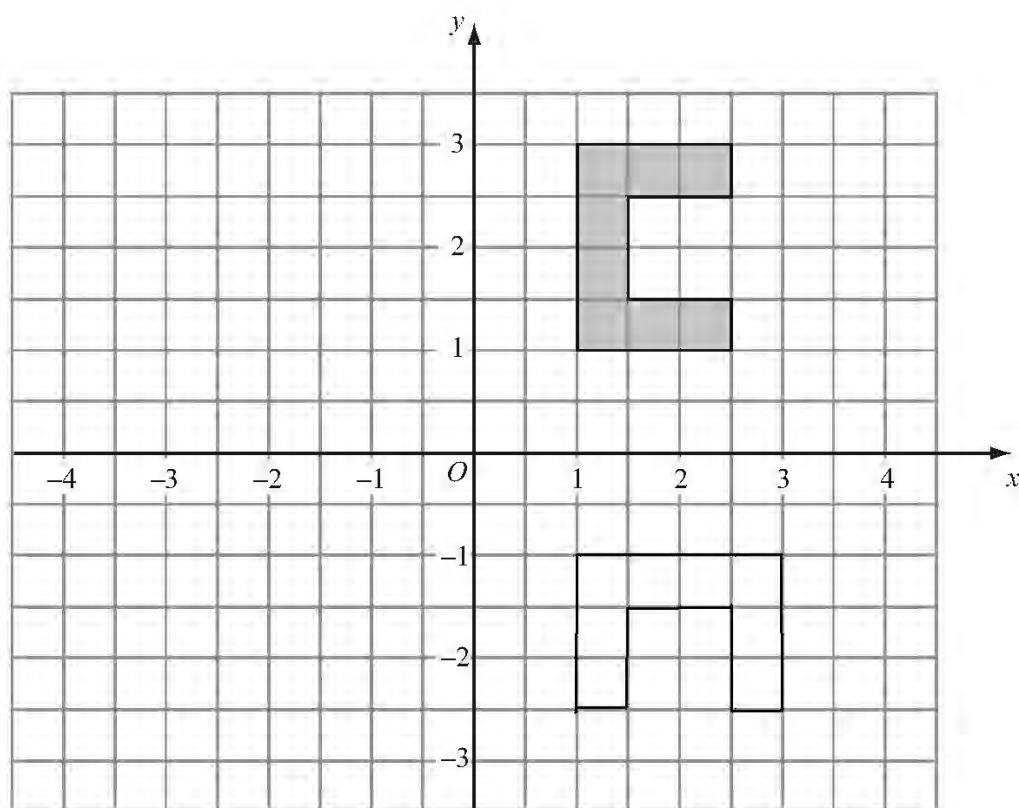
(3)

(Total 5 marks)

Q7

Leave
blank

8.

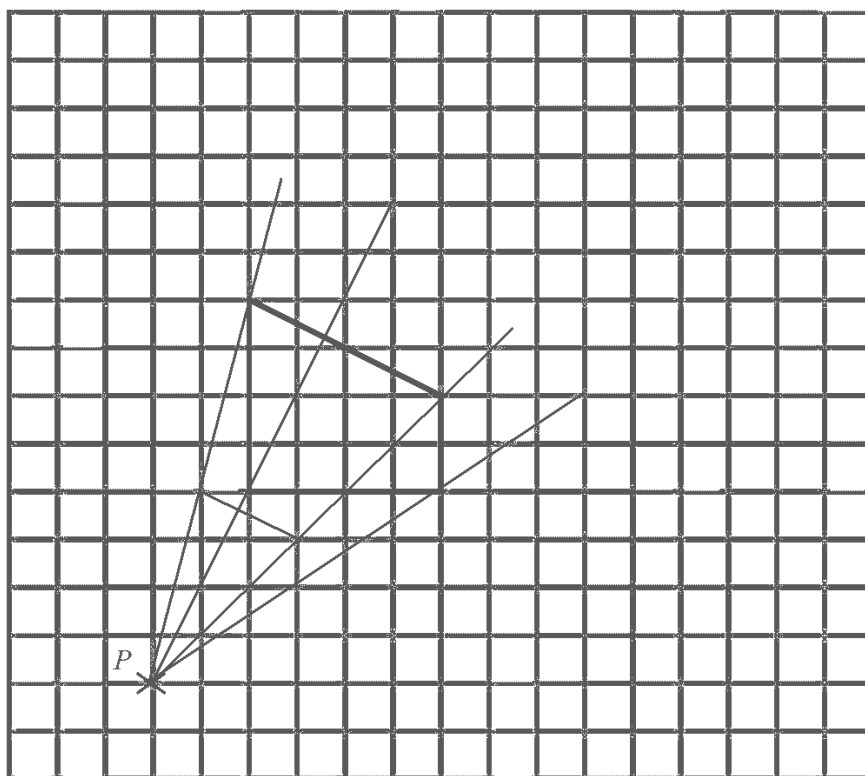


Rotate the shape 90° clockwise, centre O .

(Total 2 marks)

Q8

9.

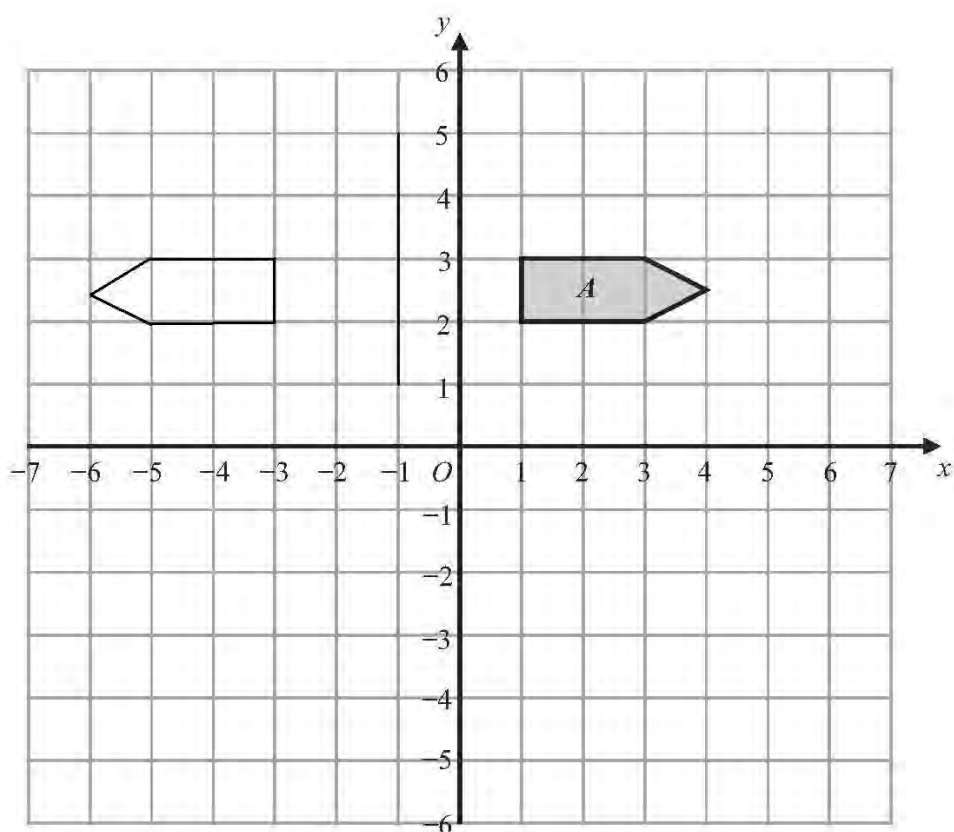


On the grid, enlarge the shape with a scale factor of $\frac{1}{2}$, centre P .

(Total 3 marks)

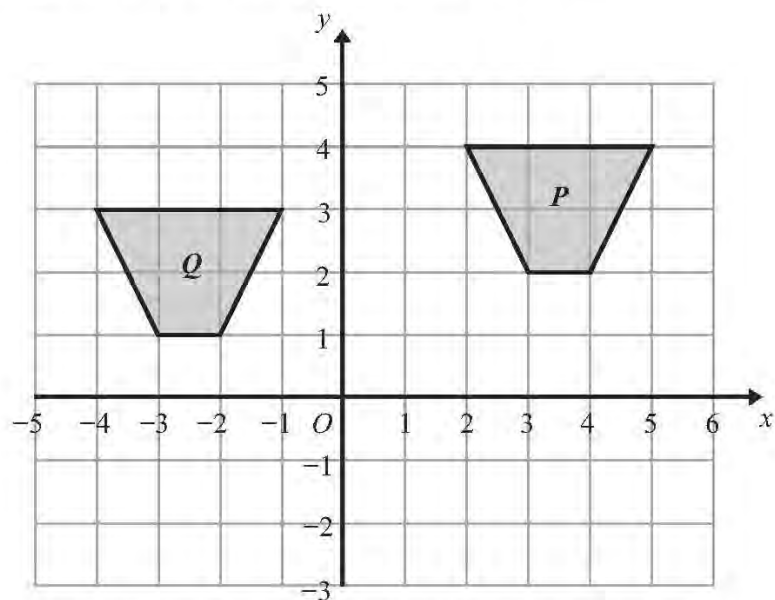
Q9

10.



(a) On the grid above, reflect shape A in the line $x = -1$

(2)



(b) Describe fully the single transformation that will map shape P onto shape Q .

Shape Q is the image of P after translation with the column vector $\begin{pmatrix} -6 \\ -1 \end{pmatrix}$.

.....

(2)

(Total 4 marks)

Q10